

CLAIMS

1. A molding resin formed from a block copolymer comprising polyhydroxycarboxylic acid structural units (I), and polyester structural units (II) derived from a dicarboxylic acid and a diol, wherein

a weight ratio (I)/(II) between said polyhydroxycarboxylic acid structural units (I) and said polyester structural units (II) is within a range from 95/5 to 10/90,

said molding resin has a microphase separated structure in which one of either said polyhydroxycarboxylic acid structural units (I) or said polyester structural units (II) forms domains within a matrix formed by said other structural units,

an average domain size of said domains is within a range from 0.08 to 5.0 μm ,

and

a weight average molecular weight of said molding resin is within a range from 10,000 to 400,000.

2. A molding resin according to claim 1, wherein when said molding resin is tested using a rotational rheometer, under measurement conditions including a frequency of 1 Hz and a temperature within a range from a melting point of said molding resin through to said melting point +50°C, then when a strain of said molding resin is varied from 1 through to 60%, a storage elastic modulus $G'(M\%)$ at a strain of $M\%$ ($1 < M \leq 60$) is within a range from 90 to 100% of a value of a storage elastic modulus $G'(1\%)$ at a strain of 1%.

3. A production process for a molding resin according to claim 1, wherein a molten mixture of a polyhydroxycarboxylic acid (A) with a weight average molecular weight of 10,000 to 400,000, and a polyester (B) with hydroxyl groups at both terminals and with a weight average molecular weight of 10,000 to 200,000, obtained by reacting a dicarboxylic acid and a diol, is subjected to an esterification reaction in presence of an esterification catalyst (C) and under conditions of reduced pressure, and said esterification reaction is continued until a point where testing of said reaction product, using a rotational rheometer, under measurement conditions including a frequency of 1 Hz and a temperature within a range from a melting point of said molding resin through to said melting point +50°C, and when a strain of said resin is varied from 1 through to 60%, results in a storage elastic modulus $G'(M\%)$ at a strain of $M\%$ ($1 < M \leq 60$) that is within a range from 90 to 100% of a value of a storage elastic modulus $G'(1\%)$ at a strain of 1%.

4. A production process for a molding resin according to claim 3, wherein said polyhydroxycarboxylic acid (A) is a material in which a polymerization catalyst contained within said polyhydroxycarboxylic acid (A) has been deactivated, and said polyester (B) is a material in which a polymerization catalyst (D) contained within said polyester (B) has been deactivated.

5. A production process for a molding resin according to claim 3, wherein said polyester (B) is either an aliphatic polyester obtained by reacting an aliphatic dicarboxylic acid and an aliphatic diol, or a polyester obtained by reacting a mixture of an aliphatic dicarboxylic acid and an aromatic dicarboxylic acid with an aliphatic diol.

6. A polyester composition comprising a molding resin according to either one of claim 1 and claim 2, and a polylactic acid (E).
7. A polyester composition according to claim 6, wherein said molding resin
- 5 comprises a weight ratio (I)/(II) between said polyhydroxycarboxylic acid structural units (I) and said polyester structural units (II) within a range from 20/80 to 70/30.